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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,249	01/04/2002	Eric C. Anderson	18602-06614	1772

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EXAMINER

WHIPKEY, JASON T

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 09/24/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,249

Applicant(s)

ANDERSON, ERIC C.

Examiner

Jason T. Whipkey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 11, 13-20 and 36 is/are allowed.
- 6) ☒ Claim(s) 9, 10, 21-24, 28-31, 35, 37, 38, 40, 41, 43, 44 and 46-48 is/are rejected.
- 7) ☒ Claim(s) 25-27, 32-34, 39, 42 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 28, 2003, has been entered.

Reissue Applications

2. The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

Response to Arguments

3. Applicant's arguments and amendment filed July 28, 2003, with respect to claims 1, 11, and 36 have been fully considered and are persuasive. The rejection of these claims has been withdrawn.

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4. Applicant's arguments and amendment filed July 28, 2003, with respect to the rejection of claims 37, 40, 43, and 46 under 35 U.S.C. § 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of Parulski.

5. Applicant's arguments filed July 28, 2003, with respect to the rejection of claims 21, 28, and 35 have been fully considered but they are not persuasive.

On page 20 of the arguments, Applicant states:

Claims 21, 28, and 35 include limitations that address the problem of rotating image data from multicolor sensors having fixed RGB patterns, such as a Bayer pattern. The Examiner's argument that multicolor image data provides more realistic video fails to show or suggest the claimed invention, which addresses the rotation of fixed RGB image data from, for example, portrait to landscape or vice-versa. Moreover, since the Examiner has failed to reasonably point out where Yoneyama shows or suggests each and every element of claims 21, 28, and 35, the Examiner has failed to make a *prima facie* case of obviousness for claims 21, 28, and 35. See MPEP 706.02(j).

Applicant's specious reasoning contradicts his own disclosure.

It is noted that the feature upon which applicant relies (i.e., a multicolor sensor having a Bayer pattern) is not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Since these claims do not specifically recite a sensor with a Bayer color pattern, they may read on a sensor with any color pattern. In Applicant's issued patent that is the subject of these reissue proceedings, the specification even states that "[f]or non-

Bayer pattern image data, a straightforward rotation is performed as is described below and an additional row and column is not required" (column 8, lines 15-19). Therefore, assuming *arguendo* that Applicant's claims are actually drawn to addressing the problem associated with reading out a rotated color image sensor, Applicant's disclosure actually teaches that no such problem necessarily exists; ergo, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Yoneyama's invention include a multicolor image sensor.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 37, 40, 43, and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Parulski (U.S. Patent No. 5,900,909).

Regarding claims 37, 40, and 46, Parulski discloses an electronic still camera (Figure 2) with a CCD image sensor 16 (column 3, line 22). Orientation determination section 36, which includes one or more orientation sensors 40, determines whether the

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camera is in a landscape orientation or in one of two portrait orientations (column 3, lines 60-64, and column 4, lines 1-2). Image processor 22 ("an auto-rotate unit") responds to an orientation signal produced by orientation determination section 36 by correcting the orientation of a captured image before the image is stored in memory card 24 (column 4, lines 13-20).

Claims 43 may be treated like claims 37, 40, and 46. The preamble of claim 43 has no patentable weight.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9, 10, 24, 31, 37, 38, 40, 41, 43, 44, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama (U.S. Patent No. 5,227,889) in view of Parulski (5,900,909).

Regarding claim 9, Yoneyama discloses a video camera that corrects for image slant. Photoelectric converter 2 captures image data, and slant detector 8 calculates the slant angle of the camera (column 2, lines 56-57). Calculations for rotating the captured image may be performed according to the program of a microcomputer

operating as coordinate axis converter 16, shown in Figure 4 (column 3, lines 27-29). It is inherent that microcomputers have memory. Therefore, coordinate axis converter 16 acts as a memory, image rotator, and image processing unit.

Photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output (column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Yoneyama is silent with regard to capturing multicolor image data.

Official Notice is taken that image sensors frequently capture multicolor image data. An advantage to capturing multicolor image data is that more realistic video can be conveyed to the viewer. For this reason, it would have been obvious to have Yoneyama's video camera generate multicolor image data.

Yoneyama is also silent with regard to detecting a landscape or one of two portrait orientations of the camera.

Parulski discloses an electronic still camera (Figure 2) with a CCD image sensor 16 (column 3, line 22). Orientation determination section 36, which includes one or more orientation sensors 40, determines whether the camera is in a landscape orientation or in one of two portrait orientations (column 3, lines 60-64, and column 4, lines 1-2).

As stated in column 4, lines 13-20, an advantage to detecting the orientation of a camera is that image processor 22 can correct the orientation of the captured image before the image is stored in memory card 24 (column 4, lines 13-20). For this reason,

it would have been obvious at the time of invention to have Yoneyama's camera detect whether it is in a landscape or portrait orientation.

Regarding claim 10, Parulski shows in Figure 4 that processed image data may be of the dimensions 512V x 768H or 768V x 512H.

Claims 24 and 31 may be treated like claims 21 and 28, respectively. However, Yoneyama is silent with regard to detecting a landscape or one of two portrait orientations of the camera.

Parulski discloses an electronic still camera (Figure 2) with a CCD image sensor 16 (column 3, line 22). Orientation determination section 36, which includes one or more orientation sensors 40, determines whether the camera is in a landscape orientation or in one of two portrait orientations (column 3, lines 60-64, and column 4, lines 1-2).

As stated in column 4, lines 13-20, an advantage to detecting the orientation of a camera is that image processor 22 can correct the orientation of the captured image before the image is stored in memory card 24 (column 4, lines 13-20). For this reason, it would have been obvious at the time of invention to have Yoneyama's camera detect whether it is in a landscape or portrait orientation.

Regarding claims 37 and 40, Yoneyama discloses a video camera that corrects for image slant. Photoelectric converter 2 captures image data, and slant detector 8 calculates the slant angle of the camera (column 2, lines 56-57). Calculations for rotating the captured image may be performed according to the program of a

microcomputer operating as coordinate axis converter 16, shown in Figure 4 (column 3, lines 27-29). Therefore, coordinate axis converter 16 acts as an auto-rotate unit.

Yoneyama is silent with regard to detecting a landscape or portrait orientation of the camera.

Parulski discloses an electronic still camera (Figure 2) with a CCD image sensor 16 (column 3, line 22). Orientation determination section 36, which includes one or more orientation sensors 40, determines whether the camera is in a landscape orientation or in one of two portrait orientations (column 3, lines 60-64, and column 4, lines 1-2).

As stated in column 4, lines 13-20, an advantage to detecting the orientation of a camera is that image processor 22 can correct the orientation of the captured image before the image is stored in memory card 24 (column 4, lines 13-20). For this reason, it would have been obvious at the time of invention to have Yoneyama's camera detect whether it is in a landscape or portrait orientation.

Regarding claims 38 and 41, calculations for rotating the captured image may be performed according to the program of a microcomputer operating as coordinate axis converter 16, shown in Figure 4 (column 3, lines 27-29). Therefore, coordinate axis converter 16 acts as an image processing unit.

The preamble of claim 43 has no patentable weight. See MPEP § 2111.02. This claim may therefore be treated like claims 37 and 40.

Claim 44 may be treated like claims 38 and 41.

Regarding claims 47 and 48, Yoneyama discloses a video camera that corrects for image slant. Photoelectric converter 2 captures image data, and slant detector 8 calculates the slant angle of the camera (column 2, lines 56-57). Calculations for rotating the captured image may be performed according to the program of a microcomputer operating as coordinate axis converter 16, shown in Figure 4 (column 3, lines 27-29). It is inherent that microcomputers have memory. Therefore, coordinate axis converter 16 acts as a memory, image rotator, and image processing unit.

Photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output (column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Yoneyama is silent with regard to detecting a landscape or one of two portrait orientations of the camera.

Parulski discloses an electronic still camera (Figure 2) with a CCD image sensor 16 (column 3, line 22). Orientation determination section 36, which includes one or more orientation sensors 40, determines whether the camera is in a landscape orientation or in one of two portrait orientations (column 3, lines 60-64, and column 4, lines 1-2).

As stated in column 4, lines 13-20, an advantage to detecting the orientation of a camera is that image processor 22 can correct the orientation of the captured image before the image is stored in memory card 24 (column 4, lines 13-20). For this reason,

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it would have been obvious at the time of invention to have Yoneyama's camera detect whether it is in a landscape or portrait orientation.

10. Claims 21, 22, 28, 29, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama.

Regarding claims 21 and 35, Yoneyama discloses a video camera that corrects for image slant. Photoelectric converter 2 captures image data, and slant detector 8 calculates the slant angle of the camera (column 2, lines 56-57). Calculations for rotating the captured image may be performed according to the program of a microcomputer operating as coordinate axis converter 16, shown in Figure 4 (column 3, lines 27-29). It is inherent that microcomputers have memory. Therefore, coordinate axis converter 16 acts as a memory, image rotator, and image processing unit.

Photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output (column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Yoneyama is silent with regard to capturing multicolor image data.

Official Notice is taken that image sensors frequently capture multicolor image data. An advantage to capturing multicolor image data is that more realistic video can be conveyed to the viewer. For this reason, it would have been obvious to have Yoneyama's video camera generate multicolor image data.

Regarding claim 22, photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output (column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Claim 28 may be treated like claim 21. Additionally, since only a sub-array of image data from video margin circle 61 is used in the output signal, at least one fewer row and column are used in the output signal than in the input signal.

Yoneyama is silent with regard to using a computer program to control the entire system.

Hardware and software are art-recognized equivalents for the same purpose. See MPEP § 2144.06. One specific advantage to controlling the system with software is that the instructions would be upgradeable for future use. For this reason, it would have been obvious to have image capture, rotation, and processing controlled by software.

Regarding claim 29, photoelectric converter 2 captures video margin circle 21 shown in Figure 3 and stores the entire area in memory, even though a sub-array of the data is actually output (column 2, line 68, through column 3, line 4). It therefore generates at least one additional row and column of image data.

Claim 35 may be treated like claim 1. Additionally, since only a sub-array of image data from video margin circle 61 is used in the output signal, at least one fewer row and column are used in the output signal than in the input signal.

11. Claims 23 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneyama in view of Tabei (U.S. Patent No. 5,805,216).

Claims 23 and 30 may be treated like claims 21 and 28, respectively. However, Yoneyama is silent with regard to using defect-correcting means in the camera.

Tabei discloses a defective pixel correction circuit that receives an output from an imaging device and detects and corrects defects produced by the device (column 1, lines 5-6). An advantage to using a defective pixel correction circuit is that more accurate image information may be presented to the viewer. For this reason, it would have been obvious for Yoneyama to include a defective pixel correction circuit.

Allowable Subject Matter

12. Claims 1-8, 11, 13-20, and 36 are allowed.

Regarding claims 1-8, 11, 13-20, and 36, no prior art could be located that teaches or fairly suggests an electronic camera that detects rotation of its body and has an image capture unit separate from the image sensor that generates an additional row and column of pixels for captured image data.

13. Claims 25-27, 32-34, 39, 42, and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 25-27 and 32-34, no prior art could be located that teaches or fairly suggests the specific procedure, including variables, recited.

Regarding claims 39, 42, and 45, no prior art could be located that teaches or fairly suggests an electronic camera that detects rotation of its body and has an image capture unit separate from the image sensor that generates an additional row and column of pixels for captured image data.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason T. Whipkey, whose telephone number is (703) 305-1819. The examiner can normally be reached Monday through Friday from 9 A.M. to 6:30 P.M. eastern daylight time, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber, can be reached on (703) 305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communication and (703) 872-9315 for After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (703) 306-0377.

Response to this action should be mailed to:

Commissioner for Patents

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P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to the appropriate number above for communications intended for entry. (For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**".)

Hand-delivered responses should be brought to the sixth floor receptionist of Crystal Park II, 2121 Crystal Drive in Arlington, Virginia.

JTW

JTW

September 22, 2003

VU LE
PRIMARY EXAMINER